(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 3 June 2004 (03.06.2004)

(10) International Publication Number WO 2004/047189 A1

(51) International Patent Classification7:

H01L 33/00

(21) International Application Number:

PCT/KR2003/002468

(22) International Filing Date:

17 November 2003 (17.11.2003)

(25) Filing Language:

(26) Publication Language:

English

(30) Priority Data: 10-2002-0071432

16 November 2002 (16.11.2002) KR 22 August 2003 (22.08.2003) 10-2003-0058209 KR 22 August 2003 (22.08.2003) 10-2003-0058210

(71) Applicant (for all designated States except US): LG INNOTEK CO.,LTD [KR/KR]; 14th Fl. Hansol Bldg., 736-1, Yoksam-dong, Kangnam-gu, 135-983 Seoul (KR).

(72) Inventors: and

(75) Inventors/Applicants (for US only): CHOO, Sung-Ho [KR/KR]; 978-1, Jangduk-dong, Gwangsan-gu, 506-831 Gwangju (KR). JANG, Ja-Soon [KR/KR]; 978-1, Jangduk-dong, Gwangsan-gu, 506-831 Gwangju (KR).

(74) Agent: HAW, Yong-Noke; 8th Fl. Sonchon Bldg., 642-15, Yoksam-dong, Kangnam-gu, 135-080 Seoul (KR).

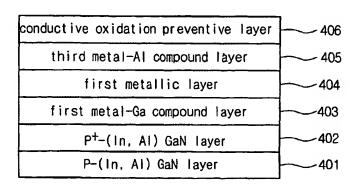
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO. NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ. TM, TN, TR. TT. TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LIGHT EMITTING DEVICE AND FABRICATION METHOD THEREOF



(57) Abstract: The present invention discloses a light device and a fabrication method thereof. An object of the present invention is to provide the light device and the fabrication method thereof an electric/thermal/structural stability is obtained, and a P-type electrode and an N-type electrode can be simultaneously formed. In order to achieve the above object, the inventive light device includes: a GaN-based layer; a high concentration GaN-based layer formed on the GaN-based layer; a first metal-Ga compound layer formed on the high concentration GaN-based layer: a first metal layer formed on the first metal-Ga compound laver; a third

metal -Al compound layer formed on the first metal layer; and a conductive oxidation preventive layer formed on the third metal-Al compound layer.